

Mehnaz Akhtar

Electrical Engineer

Motivated Electrical Engineering student with a strong foundation in Computer Architecture, Communication system, embedded systems, and pipelined RISC-V processor design. Skilled in problem-solving, teamwork, and applying theoretical knowledge to practical engineering challenges. Passionate about gaining industry experience and contributing to innovative engineering solutions.

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EDUCATION

Bs Electrical Engineering

Namal University Mianwali
Oct 2022 - Jul 2026

Courses

- Communication Systems
- Computer Architecture
- Digital Signal Processing
- Embedded Systems
- Control Systems
- Machine Learning
- Internet of Things (IoT)
- Data structures

WORK EXPERIENCE

Internship

National Radio and Telecommunication Corporation (NRTC)

Worked in Crypto Embedded Systems (R&D) focusing on STM32 and Arduino microcontroller programming.

Jul 2025 - Aug 2025

Accomplishments / Tasks

- Implemented UART, SPI, and I2C communication protocols with CRC-based error detection.
- Gained hands-on experience with STM32CubeIDE, CubeMUX, Arduino IDE, Logic Analyzer, and Docklight for debugging and development.

Internship

Faisalabad Electric Supply Company (FESCO)

Aug 2024 - Sep 2024

Accomplishments / Tasks

- Observed grid station operations, equipment layout, and power flow
- Learned about Current Transformers (CTs), Potential Transformers (PTs), and protection relays.

Interests

Reading Hiking

SKILLS

Verilog C++ MATLAB ESP32 Python Linux

Machine Learning

PROJECTS

Final Year Project

Group

Integrated a cache prefetcher into the SweRV EH1 RISC-V core to reduce instruction fetch latency and enhance processor CPI performance.

32-bit Pipelined RISC-V Processor (RV32I)

Group

Developed a 5-stage pipelined RV32I processor in Verilog featuring hazard detection, data forwarding, and GCC-compiled program execution.

Line Following Robot

Group

Designed and implemented a line following robot using IR sensors and Arduino for autonomous path tracking and navigation.

Crop Yield Prediction Analysis

Group

Built a machine learning model using regression techniques and feature engineering on agricultural datasets for crop yield prediction.

Voting Machine & Digital Hotel Management System

Group

Implemented a voting machine in C++ and designed a hotel management network system using Cisco Packet Tracer.

CERTIFICATES

Certificate of Participation – Namal Tech Expo

Robotics Category

Pakistan Engineering Council – Generative AI

Cohort 2

ACHIEVEMENTS

Winner – RISC-V Category, Namal Tech Expo 2026

Shortlisted FYP – Pakistan Semiconductor Summit (PSS) at LUMS